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Managing people, materials and costs in the warehouse and DC

From the Golden Zone

To build a “future-proof” WMS, consider the three Cs

By Jeroen van den Berg

For all the advances in warehouse management systems (WMS) over the years, a few things are still seriously lacking in today’s systems.

In my 15 years of closely following the WMS market, and in my book *Highly Competitive Warehouse Management*, I’ve been a proponent of using WMS for intelligent planning and for reporting key performance indicators.

To move into the future, WMS developers must meet three goals: compliance, completeness, and comfort.

- **Compliant.** Warehouse Management Systems of the future should be buzzword compliant. They should include multi-tier architecture (database, control logic, and user screens coded separately). WMS should be database independent, user and device independent, web-enabled, with service oriented architecture (SOA), software-as-a-service (SaaS), and zero footprint.

A good example of how to ensure that a WMS complies with the latest developments comes from the Dutch company Boltrics. It introduced a new WMS in 2010 developed with the Microsoft Dynamics platform. As such, the company piggybacks on the technological and functional development of Microsoft.

- **Complete.** The system should provide complete support of all warehouse processes with intelligent control rules for managing activities. The control rules ensure timely and efficient handling of the work while utilizing the capacity of the operators as efficiently as possible.

Clear dashboards should be provided to allow warehouse planners to view progress and make adjustments where necessary.

- **Comfortable.** Working with the WMS should be pleasant and intuitive. Screens should have a modern look and feel. In fact, you should be able to use any device to access the system. In addition, the system should be easy to adjust. After all, the only constant in logistics is that we are in a state of continuous change. Clearly, the WMS of the future should not be an obstacle for our logistics ambitions. On the contrary, procedures, control rules, screens, documents, reports, and labels should be easy to modify by experienced staff.

Implementations nowadays are still complex and risky. The implementation-of-the-future will have three strong pillars:

- Configuration. We will configure the WMS of the future by defining a workflow. This is an

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intuitive method of configuration, where users simply model their processes and controls. Any custom functions are linked to the WMS as services. Useful services can be downloaded by users and plugged into the WMS, like apps for a smartphone. The WMS will run in the cloud, so users no longer have to worry about hardware. Several firms already offer a WMS in the cloud, and this trend will grow.

- **Connection.** The WMS must be able to communicate with other systems. This is generally done via interfaces. Interfaces are, however, difficult to define and require extensive testing. Let's hope that the future will bring us a standardization of message exchange between different systems. This would make life a lot easier.

The WMS of the future will provide a convenient mapping application that allows drag-and-drop features to create links between systems. Also, in the future, communication between systems will more often take place via service calls and alerts instead of traditional interfaces.

The next wave of WMS will make it easy to connect on a personal level. Similar to social media like Facebook and LinkedIn, users will be able to link with others inside and outside their company. This creates an easy platform for sharing information and reporting problems. You will be able to give your "friends" access to specific WMS functions — for instance, vendors selecting slot times for their deliveries.

- **Consultancy.** Thinking about logistics improvement will remain an essential part of future implementations. Consultants and users

will jointly think about optimizations and scrutinize any deviations from the standard package. Through the workflow engine, they will map the desired logistics process, somewhat like value stream mapping. The WMS will then automatically configure the system settings. Testing will also be done predominantly by the WMS itself.

In the future, project management also remains a crucial factor. Often, time is lost in implementations due to late completion of tasks, slow decision-making and changing scopes. The so-called Scrum method will become popular for WMS implementations. In this implementation approach, specifications are not determined upfront, but they crystallize during the project. Moreover, the flexibility of future systems will make it less important to think about all details in advance. Instead, users will go live with a basic setup and optimize the processes afterwards. Convenient reports, provided by the WMS, will show where bottlenecks are found.

The WMS market's 20-year history has included turbulence, with many mergers and acquisitions. Vendors and packages have come and gone.

If you're investing in a WMS for the future, focus on flexibility. Look at the continuity of the supplier, the technological state of the package, and, above all, look at the flexibility in configuring processes and controls. Then your WMS is future-proof.

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